

WHAT IS CLAIMED:

1. A specimen collection container comprising:
a non-evacuated collection tube including a tubular wall extending between an open top end and a bottom end defining an interior chamber,
a piercible closure sealing said open top end of said collection tube, and
a vent adapted for displacement of air from said interior chamber of said collection tube to an exterior of said collection tube during collection of a liquid sample within said interior chamber of said collection tube.
2. A specimen collection container as in claim 1, wherein said vent is adapted for maintaining said interior chamber at ambient pressure prior to collection of a sample within said interior chamber.
3. A specimen collection container as in claim 2, wherein said vent comprises a two-way vent.
4. A specimen collection container as in claim 1, wherein said vent is adapted to seal upon contact with said liquid sample so as to prevent said displacement of air.
5. A specimen collection container as in claim 1, wherein said bottom end of said collection container is open, said specimen collection container further comprising a bottom closure sealing said open bottom end of said collection tube with said vent extending through at least a portion of said bottom closure.

6. A specimen collection container as in claim 5, wherein said top closure is removably attached to said open top end of said collection tube and said bottom closure is removably attached to said bottom end of said collection tube.

7. A specimen collection container as in claim 5, wherein said bottom closure comprises a hybrid stopper removably attachable to said open bottom end.

8. A specimen collection container as in claim 7, wherein said hybrid stopper is comprised of an elastomeric material and a venting filter.

9. A specimen collection container as in claim 8, wherein said venting filter comprises a material selected from the group consisting of high density polyethylene and high density polypropylene.

10. A specimen collection container as in claim 1, wherein said vent extends through at least a portion of said piercible closure.

11. A specimen collection container as in claim 10, wherein said piercible closure comprises a hybrid stopper removably attachable to said open top end.

12. A specimen collection container as in claim 10, wherein said hybrid stopper is comprised of an elastomeric material and a venting filter.

13. A specimen collection container as in claim 12, wherein said venting filter comprises a material selected from the group consisting of high density polyethylene and high density polypropylene.

14. A specimen collection container as in claim 1, wherein an expandable bag is positioned in the interior chamber of said tube.

15. A specimen collection container as in claim 14, wherein the expandable bag is mated with said open top end of said collection tube.

16. A specimen collection container as in claim 14, wherein the expandable bag is mated with said piercible closure.

17. A specimen collection container comprising:
a collection container comprising a non-evacuated collection tube including a cylindrical tubular wall extending between an open top end and an open bottom end defining an interior chamber therebetween,
a piercible closure sealing said open top end of said collection tube, and
a venting closure sealing said open bottom end of said collection tube, said venting closure adapted for displacement of air from said interior chamber of said collection tube to an exterior of said collection tube during collection of a liquid sample within said interior chamber of said collection tube.

18. A specimen collection container as in claim 17, wherein said venting closure includes a two-way vent structure.

19. A specimen collection container as in claim 1, wherein said vent is adapted to seal upon contact with said liquid sample so as to prevent said displacement of air.

20. A specimen collection container as in claim 17, wherein said venting closure comprises a hybrid stopper including an elastomeric material containing a venting filter.

21. A specimen collection container as in claim 20, wherein said venting filter comprises a material selected from the group consisting of high density polyethylene and high density polypropylene.

22. A specimen collection container as in claim 17, wherein an expandable bag is positioned in the interior chamber of said tube.

23. A specimen collection container as in claim 22, wherein the expandable bag is mated with said open top end of said collection tube.

24. A specimen collection container as in claim 23, wherein the expandable bag is mated with said piercible closure.

25. A specimen collection container comprising:
a non-evacuated collection tube including a tubular wall extending between an open top end and a bottom end defining an interior chamber,
a piercible closure sealing said open top end of said collection tube,
an internal container positioned within the interior chamber of said collection tube and in sealed engagement with said open top end of said collection tube, said internal container establishing a closed environment for containment of a liquid sample, and

a vent adapted for displacement of air from said interior chamber of said collection tube to an exterior of said collection tube during collection of a liquid

sample within said internal container within said interior chamber of said collection tube.

26. A specimen collection container as in claim 25, wherein said internal container comprises an expandable bag positioned in the interior chamber of said tube.

27. A specimen collection container as in claim 26, wherein the expandable bag is mated with said open top end of said collection tube.

28. A specimen collection container as in claim 26, wherein the expandable bag extends from said piercible closure.

29. A specimen collection container as in claim 25, wherein said vent is adapted for maintaining said interior chamber at ambient pressure prior to collection of a sample within said interior chamber.

30. A specimen collection container as in claim 29, wherein said vent comprises a two-way vent.

31. A specimen collection container as in claim 25, wherein said vent is adapted to seal upon contact with said liquid sample so as to prevent said displacement of air.

32. A specimen collection container as in claim 25, wherein said bottom end of said collection container is open, said specimen collection container further comprising a bottom closure sealing said open bottom end of said collection tube with said vent extending through at least a portion of said bottom closure.

33. A specimen collection container as in claim 32, wherein said top closure is removably attached to said open top end of said collection tube and said bottom closure is removably attached to said bottom end of said collection tube.

34. A specimen collection container as in claim 32, wherein said bottom closure comprises a hybrid stopper removably attachable to said open bottom end.

35. A specimen collection container as in claim 34, wherein said hybrid stopper is comprised of an elastomeric material and a venting filter.

36. A specimen collection container as in claim 35, wherein said venting filter comprises a material selected from the group consisting of high density polyethylene and high density polypropylene.

37. A method for collecting a biological sample comprising the steps of:

- a) providing a non-evacuated collection tube including a vent adapted for displacement of air from within said collection tube to an exterior environment and a piercible closure providing access to the interior of said collection tube;
- b) accessing the interior of said collection tube through said piercible closure; and
- c) transferring a biological sample through said piercible closure into said interior of said collection tube such that any air present within said interior of said collection tube will vent to the exterior environment through said vent during such transferring step.

38. The method of claim 37, wherein said accessing step comprises establishing fluid communication between a blood vessel of a patient and the interior

of said collection tube, such that blood pressure causes transferring of blood from the blood vessel to the interior of the collection tube.

39. The method of claim 38, wherein said vent is adapted to seal upon contact with said biological sample so as to prevent said displacement of air.

40. The method of claim 38, wherein said vent is protected from said biological sample by the presence of an expandable bag positioned in the interior chamber of said tube.